



# UNITED STATES PATENT AND TRADEMARK OFFICE

cel

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,907	03/29/2001	Sam Mohan	CISCP695	9030
26541	7590	06/29/2005	EXAMINER	
RITTER, LANG & KAPLAN P.O. BOX 2448 SARATOGA, CA 95070			MATTIS, JASON E	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/822,907	Applicant(s) MOHAN, SAM	
	Examiner Jason E. Mattis	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-17 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 4/7/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is in response to the amendment filed on 4/7/05. Due to the amendment, previous objections to claim 9 and Figures 1-3 have been withdrawn. Claims 1-17 are currently pending in the application.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-8 and 11-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Each of claims 1-8 and 11-15 are drawn to a method of monitoring nodes in a network including a plurality of nodes. The methods of these claims are not tangibly embodied. These methods merely recite steps relating to the manipulation of data. Therefore, the claims do not fall in the statutory categories of a useful process, machine, manufacture, or composition of matter. To be a statutory process claim, the claim must either have independent physical acts, or manipulation of data representing physical objects or activities, or be limited to a practical application by producing a concrete, tangible, and useful result.

In anticipation of the claims 1-8 and 11-15 being amended to overcome the rejections under 35 U.S.C. 101, and in order to expedite examination of these claims,

rejections these claims are also included in the rejections under 35 U.S.C. 103(a) below.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bondi (U.S. Pat. 5710885) in view of Miller et al. (U.S. Pat. 6014707).

**With respect to claim 1**, Bondi discloses a method of monitoring nodes in a network including a plurality of nodes **(See the Abstract of Bondi for reference to a method and system for monitoring nodes in a network having a plurality of nodes)**. Bondi also discloses processing at least one node identified by an identifier in a set of a list of sets with each set of the list of sets including zero or more identifiers of nodes **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to processing nodes by sending a status poll to the nodes that are identified by IP addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list of the entries, or sets, with each entry in the queue corresponding to exactly one node identifier)**. Bondi further discloses

advancing to the next set of the list of sets (**See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll messages to each node in the queue at a predetermined time interval meaning that after a poll is sent to the current entry in the queue, the queue will advance to the next entry and send a poll to the next entry after the predetermined period of time**). Bondi does not disclose that the list is a circular list of sets.

**With respect to claim 9**, Bondi discloses a system comprising a processor (**See column 1 lines 41-64 of Bondi for reference to a host processor that is a network management station in a system**). Bondi also discloses a memory storing a network management system for execution by the processor for monitoring nodes in a network (**See column 1 lines 41-64 of Bondi for reference to the network manager being responsible for monitoring nodes of the system, meaning, since the network manager is a processor, there must be a code stored in a memory of the network manager that is used to monitor the nodes**). Bondi further discloses computer code that processes at least one node identified by an identifier in a set of a list of sets with each set of the list of sets including zero or more identifiers of nodes (**See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to the network monitor processing nodes by sending a status poll to the nodes that are identified by IP addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list of the entries, or sets, with each entry in the circular queue corresponding to exactly one node identifier, meaning there must be a computer code stored in the network manager to execute this process**).

Art Unit: 2665

Bondi also discloses computer code that advances to the next set of the list of sets (**See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll messages to each node in the queue at a predetermined time interval meaning that after a poll is sent to the current entry in the queue, the queue will advance to the next entry and send a poll to the next entry after the predetermined period of time, meaning there must be a computer code stored in the network manager to execute this process**). Bondi does not disclose that the list is a circular list of sets.

**With respect to claim 10**, Bondi discloses a method for monitoring nodes in a network including a plurality of nodes (**See the Abstract of Bondi for reference to a method and system for monitoring nodes in a network having a plurality of nodes**). Bondi also discloses a means for processing at least one node identified by an identifier in a set of a list of sets with each set of the list of sets including zero or more identifiers of nodes (**See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to processing nodes by sending a status poll to the nodes that are identified by IP addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list of the entries, or sets, with each entry in the queue corresponding to exactly one node identifier**). Bondi further discloses a means for advancing to the next set of the list of sets (**See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll messages to each node in the queue at a predetermined time interval meaning that after a poll is sent to the current entry in the queue, the queue will**

**advance to the next entry and send a poll to the next entry after the predetermined period of time).** Bondi does not disclose that the list is a circular list of sets.

**With respect to claim 11,** Bondi discloses a method of monitoring nodes in a network including a plurality of nodes **(See the Abstract of Bondi for reference to a method and system for monitoring nodes in a network having a plurality of nodes).** Bondi also discloses receiving a signal from a timer at periodic intervals **(See column 5 line 54 to column 6 line 28 and Figures 3 of Bondi for reference to a status poll transmission queue 10 receiving periodic signals from a rate control mechanism 12).** Bondi further discloses processing polling responses **(See column 7 lines 44-63 and Figure 7 of Bondi for reference to processing ping acknowledgments, which are polling responses).** Bondi also discloses processing at least one node identified by an identifier in a set of a list of sets with each set of the list of sets including zero or more identifiers of nodes **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to processing nodes by sending a status poll to the nodes that are identified by IP addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list of the entries, or sets, with each entry in the queue corresponding to exactly one node identifier).** Bondi further discloses advancing to the next set of the circular list of sets **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll messages to each node in the queue at a predetermined time interval meaning that after a poll is sent to the current entry in the queue, the**

**queue will advance to the next entry and send a poll to the next entry after the predetermined period of time).** Bondi does not disclose that the list is a circular list of sets.

**With respect to claim 16,** Bondi discloses a system comprising a processor **(See column 1 lines 41-64 of Bondi for reference to a host processor that is a network management station in a system).** Bondi also discloses a memory storing a network management system for execution by the processor for monitoring nodes in a network **(See column 1 lines 41-64 of Bondi for reference to the network manager being responsible for monitoring nodes of the system, meaning, since the network manager is a processor, there must be a code stored in a memory of the network manager that is used to monitor the nodes).** Bondi further discloses computer code for a timer that generates a signal at periodic intervals **(See column 5 line 54 to column 6 line 28 and Figures 3 of Bondi for reference to a status poll transmission queue 10 receiving periodic signals from a rate control mechanism 12, meaning there must be a computer code stored in the network manager to execute this process).** Bondi also discloses computer code for a poller that processes polling responses **(See column 7 lines 44-63 and Figure 7 of Bondi for reference to processing ping acknowledgments, which are polling responses, meaning there must be a computer code stored in the network manager to execute this process).** Bondi further discloses computer code for a poller that processes at least one node identified by an identifier in a set of a list of sets with each set of the list of sets including zero or more identifiers of nodes **(See column 5 line 54 to column 6 line 28 and**



Art Unit: 2665

**Figures 3-5 of Bondi for reference to the network monitor processing nodes by sending a status poll to the nodes that are identified by IP addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list of the entries, or sets, with each entry in the queue corresponding to exactly one node identifier, meaning there must be a computer code stored in the network manager to execute this process).** Bondi also discloses computer code that advances to the next set of the list of sets **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll messages to each node in the queue at a predetermined time interval meaning that after a poll is sent to the current entry in the queue, the queue will advance to the next entry and send a poll to the next entry after the predetermined period of time, meaning there must be a computer code stored in the network manager to execute this process).** Bondi does not disclose that the list is a circular list of sets.

**With respect to claim 17,** Bondi discloses a system for monitoring nodes in a network including a plurality of nodes **(See the Abstract of Bondi for reference to a method and system for monitoring nodes in a network having a plurality of nodes).** Bondi also discloses a means for receiving a signal from a timer at periodic intervals **(See column 5 line 54 to column 6 line 28 and Figures 3 of Bondi for reference to a status poll transmission queue 10 receiving periodic signals from a rate control mechanism 12).** Bondi further discloses a means for processing polling responses **(See column 7 lines 44-63 and Figure 7 of Bondi for reference to processing ping acknowledgments, which are polling responses).** Bondi also

Art Unit: 2665

discloses a means for processing at least one node identified by an identifier in a set of a list of sets with each set of the list of sets including zero or more identifiers of nodes **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to processing nodes by sending a status poll to the nodes that are identified by IP addresses, or identifiers, in a entry, which is a set containing 1 node, of a queue, which is a list of the entries, or sets, with each entry in the queue corresponding to exactly one node identifier)**. Bondi further discloses a means for advancing to the next set of the circular list of sets **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status poll messages to each node in the queue at a predetermined time interval meaning that after a poll is sent to the current entry in the queue, the queue will advance to the next entry and send a poll to the next entry after the predetermined period of time)**. Bondi does not disclose that the list is a circular list of sets.

**With respect to claims 1, 9, 10, 11, 16, and 17, Miller et al., in the field of communications discloses using a circular list of sets (See column 10 line 53 to column 11 line 29 of Miller et al. for reference to using a circular queue, which, as defined by Miller et al., includes scheduling timeslots 32 formatted as a list of download records 36, with each list having zero or more entries, and for reference to servicing each timeslot in a circular manner by checking to see if a timeslot contains a record 36, and servicing the records 36 if one is present before moving on to the next timeslot in a circular manner)**. Using a circular list of sets has the advantage of allowing data transmissions to many users to be serviced in a round-robin

fashion, such that multiple data transmission may occur simultaneously without having to wait until transmissions of data to one device have been fully completed before sending data to other devices.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Miller et al., to combine the used of a circular list of sets, as suggested by Miller et al., with the system and method of Bondi, with the motivation being to allow data transmissions to many users to be serviced in a round-robin fashion, such that multiple data transmission may occur simultaneously without having to wait until transmissions of data to one device have been fully completed before sending data to other devices.

**With respect to claim 2,** Bondi discloses that processing includes sending a polling message to the at least one node **(See column 5 line 54 to column 6 line 28 and Figures 3-5 of Bondi for reference to sending status polls to the nodes identified in the queue).**

**With respect to claim 3,** Bondi discloses moving the identifier to a subsequent set of the list of sets **(See column 7 line 64 to column 8 line 6 and Figure 7 of Bondi for reference to when a timeout occurs before an acknowledgement is received for a poll, or ping, and if the ping count does not match the maximum ping count number, storing the IP address, or identifier, of the node at a subsequent entry, or set, in the queue, or list of entries).**

**With respect to claim 4,** Bondi discloses that the subsequent set is the set that will be processed at the next timing interval of the node identified by the identifier **(See**

**column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to storing the node at a subsequent position in the queue only after a timeout, corresponding to the next timing interval that the node should be polled at).**

**With respect to claim 5, Bondi discloses adding a copy of the identifier to a subsequent set of the circular list of sets (See column 7 line 64 to column 8 line 6 and Figure 7 of Bondi for reference to when a timeout occurs before an acknowledgement is received for a poll, or ping, and if the ping count does not match the maximum ping count number, storing a copy of the IP address, or identifier, of the node at a subsequent entry, or set, in the queue, or list of entries).**

**With respect to claim 6, Bondi discloses that the subsequent set is the set that will be processed when a response from the node identified by the identifier is expected (See column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to storing the node at a subsequent position in the queue only after a timeout, corresponding to the next timing when a response from the node is expected by).**

**With respect to claim 7, Bondi discloses processing polling responses (See column 7 lines 44-63 and Figure 7 of Bondi for reference to processing ping acknowledgments, which are polling responses).**

**With respect to claim 8, Bondi discloses that the processing and advancing are performed at periodic intervals (See column 5 line 54 to column 6 line 28, column 7 lines 36-45, and Figures 3 and 7 of Bondi for reference to sending and processing**

**pings in a controlled sequence at predetermined periodic intervals as controlled by a rate control mechanism 12).**

**With respect to claim 12, Bondi discloses moving the identifier to a subsequent set of the list of sets (See column 7 line 64 to column 8 line 6 and Figure 7 of Bondi for reference to when a timeout occurs before an acknowledgement is received for a poll, or ping, and if the ping count does not match the maximum ping count number, storing the IP address, or identifier, of the node at a subsequent entry, or set, in the queue, or list of entries).**

**With respect to claim 13, Bondi discloses that the subsequent set is the set that will be processed at the next timing interval of the node identified by the identifier (See column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to storing the node at a subsequent position in the queue only after a timeout, corresponding to the next timing interval that the node should be polled at).**

**With respect to claim 14, Bondi discloses adding a copy of the identifier to a subsequent set of the list of sets (See column 7 line 64 to column 8 line 6 and Figure 7 of Bondi for reference to when a timeout occurs before an acknowledgement is received for a poll, or ping, and if the ping count does not match the maximum ping count number, storing a copy of the IP address, or identifier, of the node at a subsequent entry, or set, in the queue, or list of entries).**

**With respect to claim 15, Bondi discloses that the subsequent set is the set that will be processed when a response from the node identified by the identifier is expected (See column 7 line 44 to column 8 line 6 and Figure 7 of Bondi for reference to**

**storing the node at a subsequent position in the queue only after a timeout, corresponding to the next timing when a response from the node is expected by).**

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

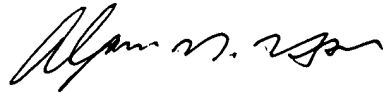
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jem



**ALPUS H. HSU  
PRIMARY EXAMINER**